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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,180	12/13/2001	Darryl Franklin Clark	KCC-16,260	1100
35844	7590	06/10/2004	EXAMINER	
PAULEY PETERSEN KINNE & ERICKSON 2800 WEST HIGGINS ROAD SUITE 365 HOFFMAN ESTATES, IL 60195			YAO, SAMCHUAN CUA	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,180

Applicant(s)

CLARK ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-20) in the reply filed on 05-03-04 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pike et al (US 5,382,400) in view of WO 00/29658 and Jackson et al (US 5,350,370).

With respect to claims 1 and 17-18, Pike et al discloses a process of making an absorbent non-woven web, the process comprises:

- a) melt-spinning an array of multi-component filaments by extruding a molten thermoplastic through a spinneret (18);
- b) immediately after the melt-spinning operation, quenching the array of multi-components filaments using a stream of cooling air (20);
- c) drawing the array of quenched filaments in a fiber draw unit (22);
- d) introducing a stream of heated air (24) into the fiber draw unit to crimp the filaments, wherein the heated air is introduced around an upper portion of the fiber draw unit and above a divergence zone (i.e. below the fiber draw unit as illustrated in figure 1).

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- e) collecting the array of crimped filaments from the divergence zone onto a forming conveyor to form a substantially uniformly distributed fibrous web; and,
- f) passing the fibrous web through thermal point bonding rollers (34) or through-air bonder (36) to form a finished non-woven web (col. 3 lines 1-5; col. 5 lines 63-68; col. 7 line 27 to col. 10 line 14).

Note: the limitation in claim 1 of *"introducing absorbent particles ... into the fiber distribution unit at a point above a divergence zone of the mass of filaments in the fiber distribution unit"* (emphasis added) does not require a divergence zone

to be disposed in a fiber distribution unit. The preposition *"in"* in this limitation is taken to be referring to the mass of filaments being *"in the fiber distribution unit"*.

Pike et al does not teach introducing absorbent particles into a fiber draw unit via a stream of heated air. However, since WO' 658 teaches air-injecting SAP and pulp fibers to an extruded array of bi-component filaments, while filaments are still *"hot and tacky"* and before the filaments are deposited onto a forming conveyor; and, further teaches the desirability of forming crimp filaments (page 11 last full paragraph; page 12 lines 1-6), it would have been obvious in the art to introduce SAP and pulp fibers into a fiber draw unit via a heated stream of air.

The thermal point bonding operation taught by Pike et al is taken to intrinsically to (a certain degree) densify heat-softened filaments in a web. In any event, it would have been obvious in the art to densify a fibrous web taught by Pike et al at desired a pressure, temperature and time, because Jackson et al discloses a desirability of heat-pressing a fibrous absorbent web for a sufficient time to

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activate binder fibers in the web, thereby bonding and compacting the web

(abstract; col. 7 line 27 to col. 8 line 38).

With respect to claims 2-3, see column 9 lines 10-24 of the Pike et al patent, column 8 lines 17-38 of the Jackson et al patent, and page 6 full paragraph 6 of the WO '658 patent. It would have been obvious in the art to densify a fiber web, while the binder component of bicomponent filaments in the fiber web is fully activated (i.e. melt) as such is a common practice in the art in order to effectively bond the fiber web.

With respect to claim 4, see page 8 full paragraphs 1-2 of the WO '658 patent.

With respect to claim 5, see page 5 last full paragraph and page 15; claims 3-5 of the WO '658 patent.

With respect to claim 6, see page 12 of the WO '658 patent.

With respect to claim 7, page 11 full paragraphs 2-3 of the WO '658 patent.

With respect to claim 8, the recited components of a multicomponent filament are conventional in the art of making an absorbent web.

With respect to claim 9, see claim 4 of the WO '658 patent.

With respect to claim 10, see claim 6 of the WO '658 patent.

With respect to claims 11-13, see page 7 full paragraph 1 of the WO '658 patent.

With respect to claims 14-16, see see page 20, claims 19-21 of the WO '658 patent.

With respect to claim 19, see page 6 full paragraph 4.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 9 as applied to claim 1 above, and further in view of Haynes et al (US 6,019,152).

It would have been obvious in the art to subject a fibrous web on a forming wire through a forced air heater, as such is conventional in the art in order to enhance the structural integrity of a fibrous web as exemplified in the teachings of Haynes et al (col. 2 lines 19-52; figure 8).

Response to Arguments

5. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Geus et al (US 5,766,646; figure 1), Geus et al (US 5,814,349; figures 1-2) and Gehrig et al (US 3,929,542; figures 1 and 3) are cited as references of interest showing a fiber distribution unit having a divergence zone at a bottom section of the fiber distribution unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
06-08-04